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high, while that of another portion is very low, some of the books prepared for the schools will be very good, while it is quite as certain that others will be as bad as human iniquity can make them. In some of the book-shops in England, I saw text-books for schools, on no single page of which should a child ever be allowed to look,—books for the young, filled with vile caricatures and low ribaldry, at once degrading to the taste and fatal to the moral sensibilities.

Before the establishment of the present National Board of Education for Ireland, the same evils existed there. In one of the reports of the commissioners for inquiring into the state of the Irish schools, they say, "We have already adverted to the deplorable want of such qualification in a great majority of those who now teach in the Common Schools, and to the pernicious consequences arising from it. Their ignorance, we have reason to believe is not seldom their least disqualification; *and the want of proper books often combines with their own opinions and propensities, in introducing into their schools such as are of the worst tendency.*" Again, speaking of the advantages to be derived from the establishment of a Board of Education who should exercise a supervisory power over the books to be used, they say, "From the execution of this part of the plan, we anticipate advantages of the utmost importance to the whole country, inasmuch as we cannot doubt that the books thus prepared will, by degrees, be universally adopted in every school, whether public or private; and while education is thus facilitated by a uniform system of instruction, the evils arising from the want of proper books adapted to the inferior schools will be removed, *and the children be no longer exposed to the corruption of morals and perversion of principles too often arising from the books actually in use.*"

Such are some of the mature, full-grown calamities which result from the neglect of a state or nation to establish a general system of education for its people; and from leaving this most important of all the functions of a government to chance and to the speculations of irresponsible men.

We can never fully estimate the debt of gratitude we owe to

our ancestors for establishing our system of Common Schools. In consequence of their wisdom and foresight, we have all grown up in the midst of these institutions; and we have been conformed to them in all our habits and associations from our earliest childhood. A feeling of strangeness, of the loss of something customary and valuable, would come over us, were they to be taken away or abolished. How different it would be if these institutions were strangers to us,—if, every time we were called to do anything in their behalf, we should violate a habit of thought and action, instead of fulfilling one. How different, if every appropriation for their support were a new burden; if every meeting for their administration were an unaccustomed tax upon our time, and if we were obliged to await the slow progress of an idea in the common mind, for the adoption of any improvement. Emphatically how different, if the wealthy and leading men of the community had gathered themselves into sects and cabals, each one with his hand against all the rest, unless when they should temporarily unite to resist the establishment of a system for the equal benefit of all. It is in consequence of what was done for us, two hundred years ago, that we are now carrying on a work with comparative ease, which in many of our sister States, as well as in some foreign countries, must be accomplished, if accomplished at all, with great labor and difficulty. Can there be a man amongst us so recreant to duty, that he does not think it incumbent upon him to transmit that system, in an improved condition, to posterity, which his ancestors originated for him?

Let any one examine those voluminous Reports of the Evidence, taken before parliamentary commissioners, in England, on the subject of education, and he will be astonished to find men of the highest capacities, and of the most extensive attainments on other subjects, faltering and doubting on the easiest points of this, and groping their way after plans and arrangements, which here have not only been long reduced to practice, but are familiar to the whole body of the people.

SCHOOLHOUSES.

With the exception of the magnificent private establishments in England and France, I have seen scarcely a schoolhouse in Europe worthy to be compared even with the second-rate class of our own. And even those princely edifices were far inferior to ours in their fittings-up and their internal arrangements. In Scotland, and in some parts of England, the schools for the poorer classes were crowded to a degree, of which we have never seen an example, and of which we can hardly form a conception. I have seen more than four hundred children in two rooms, only 30 ft. by 20, each; and in Lancasterian schools, a thousand children in a single room. In Prussia, and in the other states of Germany, which I visited, the schoolhouses were of a very humble character. I should here make one exception in favor of Leipsic, in the kingdom of Saxony, which, in addition to having one of the best, if not the very best system of,

education to be found in any city of Germany, has also excellent schoolhouses; and the one last erected as a charity school for poor children, is the best.

One most valuable feature, however, belongs to all schoolhouses of the larger kind. They are uniformly divided into class rooms; and an entire room is appropriated to each class, so that there is no interruption of one class by another. But the rooms themselves are small in every dimension, excepting the distance between the scholars' seats and the floor. In this respect they resemble those formerly built among ourselves. I saw scarcely one where the children, while seated at their desks, could touch the floor with their feet. In regard to their present, and our old ones, it may be said, that if one of these low-studded rooms with its enormously high seats, should by any chance be preserved for a thousand years, and should then be revealed to posterity, as the ruins of Pompeii and Herculaneum have been to us, the antiquarians of that remote day would be likely to infer from an inspection of the low ceiling, and the great distance between the seats and the floor, that the children of their ancestors were a race of monsters,—giants at one end and pigmies at the other.

Nor did I see a single public school in all Germany, in which each scholar, or each two scholars had a desk to themselves. A few private schools only had adopted this great improvement. Backs to the seats, too, were almost as rare as single desks. The universal plan, whether for schools, gymnasia, or colleges, is, to have one long bench or form, on which ten or a dozen pupils can sit, with a table or desk before it of equal length, to be used in common by the occupiers of the seats. Each room has an aisle, or vacant space along the wall on one side, and sometimes on both.

One striking peculiarity of almost all Prussian and Saxon schoolhouses, is, that they contain apartments for the residence of the teacher and his family.

In many places in Holland, I found that arrangements had been made, on scientific principles, for warming and ventilating the schoolrooms; but in Germany never. In the schools of the latter country, whether high or low, there was an astonishing degree of ignorance or inattention to the laws of health and life, so far as they depend upon breathing pure air. The atmosphere of the rooms was often intolerable. In the hottest summer days, only one window of a room full of children would be open; and when the door was opened for their egress or ingress, the window was closed. The stoves by which the rooms are warmed in winter, resemble very much, in the principles of their construction, those which we call "air-tight;" and they are often so placed as to be fed at a door outside of the room, so as to prevent even that slight change of air which is caused when that in the room is used to sustain the combustion of the fuel. To my very frequent question, in what manner the rooms were ventilated, the universal reply was, by opening a door or window,—a very insufficient theory, and one which, I fear, poor as it is, is seldom reduced to practice.

When I surveyed the condition of things in Massachusetts, preparatory to making that part of my last report which relates to Human Physiology, I almost came to the conclusion that there could be no part of the civilized world, where less attention was paid to the laws of health and life than among ourselves. My present opinion is, that, ignorant and inattentive as we are, there is no part of the world that is not as much, or even more so. What benefits, then, must flow to mankind from a universal knowledge and practice of the principles of the beautiful and noble science of Physiology.

Were one to attempt a philosophical explanation of that lethargy of character, that want of activity and enterprise, for which the Germans are so proverbial, I think he would fail of a just solution of the problem, if he left out of the account the errors of their physical training. I visited a very great number of hospitals for poor children, orphans, &c., some of which were very extensive, containing a thousand children. The dormitories of all were large, common, generally unventilated rooms, with beds placed side by side, and as near each other as they could be conveniently arranged. I have often seen from a hundred to a hundred and fifty beds in the same apartment. But the bedding was the most extraordinary. Though in the middle of summer, each child was supplied with two feather beds, one for himself to lie on, the other to lie on him. The usual outfit which I saw, in the hospitals and other places for children, was one sheet and two feather beds for each child; and these feather beds would weigh from ten to twenty pounds each. Where the principal or assistant teacher of the school slept in the same room, the bed allotted to him had an increased bulk of feathers, corresponding to the received ideas of his rank and dignity. In some instances, the enormous feather beds under which the inhabitants sleep, weigh forty or more pounds. In many of the best hotels, in the first cities of Germany, such a thing as a woollen blanket is not to be found. Occasionally I found these in prisons, for it seems to be considered as a part of the punishment of a malefactor to be debarred from sleeping under a feather bed. Such is the universal custom of the country. Every respectable man and child sleeps between two feather beds, summer and winter. The debilitating effect of such a practice both upon body and mind must be incalculable. If the leading members of the Holy Alliance wish to abase their subjects into a voluntary submission to arbitrary power,—if they design so to enervate their spirits that they will never pant for the joys and the immunities of liberty, and so to impair their vigor of body that they will have no energy to achieve it, they can do no one thing more conducive to these ends, than to perpetuate this national custom of low ventilation and sleeping between feather beds.*

* The only public edifice I saw in Europe which enjoys a perfect *luxury* of ventilation, was the British House of Parliament. The arrangements for this object were conceived by that celebrated chemist, Dr. Reid, and executed under his

READING BOOKS.

I have made it a point to look particularly into the reading books used in schools. Wherever I have been I have observed a marked distinction between the foreign and our own, as it regards the character of the selections of which they are composed. A great proportion of the pieces which make up our compilations consist of oratorical, sentimental, or poetical pieces. The foreign reading books, on the other hand, partake more largely of the practical or didactic. Ours savor more of literature or belles-lettres; theirs of science and the useful arts.

Perhaps the best mode of giving a definite idea of the character of the foreign reading books, would be to quote a specifica-

superintendence. The plan is scientific, and the apparatus for executing it complete.

In the external wall of the House of Commons, a great number of orifices open into the out-door air,—every alternate brick for a space of perhaps twenty feet square being removed from the wall. Through these orifices the *crude air* or *unmanufactured article* is admitted. Stretched from above the upper line of these orifices,—that is, from the ceiling of the room into which they open inwardly, and reaching to the floor at an angle of 45°, is a sheet or screen of coarse cloth, through which all the air received is strained or sifted. By this means, all particles of coal smoke, soot, or other impurity, held in mechanical solution with the atmosphere, are intercepted, and only pure external air is allowed to enter. Having passed through this sieve or strainer, the air may now be conducted from this apartment in either one of two directions, as it requires or does not require to be warmed. If it requires to be warmed, it passes through a room filled with a great number of heated iron pipes, which raise it to the desired temperature. Another passage-way is provided when it does not require to be warmed; and by opening different doors it is directed into one or the other of these at pleasure. Here too it is further purified from any admixture of foul gases by exposure to the action of chloride of lime; and on great occasions it is scented with cologne water or other perfume. Further on, it passes through a third apartment, which is the identical place where Guy Fawkes was said to have hidden his gun-powder to blow up the British Parliament, in 1605. In this room is a system of iron conduits or water pipes, lying upon the floor and crossing each other after the manner of net-work or meshes. At brief intervals along the whole course of these pipes, are little perforated caps, like the top of a pepper-box. These pipes are to be filled with water, under a heavy pressure. On the turning of a grand cock, this water is driven out through the minute orifices above mentioned, in beautiful, fine jets, which, striking the upper ceiling of the apartment, rebound and fall back to the floor in the finest drops. During hot days this apparatus is kept playing all the time while the houses are in session, thereby imparting a delicious coolness and freshness to the air before it enters the halls. In addition to these jets of water designed to cool and freshen the air, bags of ice are suspended in this apartment, the melting of which, by absorbing the caloric of the atmosphere, acts as a refrigerator. The air, being now cleansed, purified, warmed, cooled, or scented, is prepared to enter the hall of the House. For this purpose it is carried beneath the whole extent of the floor. This floor is perforated throughout with small holes, a little larger than a pipe-stem or goose-quill; and through these, the air is filtrated,—so to speak,—into the room above. But to prevent any current perceptible to the feet or limbs, the floor of the House is covered with a hair carpet, so that the air may rise imperceptibly through its meshes. Similar provision is also made for carrying a full supply of fresh air into the galleries, so that they are not dependent upon that which has ascended from the breathers below. The upper or over-head ceiling of the house is not tight, although to one looking at it from below it exhibits no opening. Through this ceiling the foul air is carried off into the attic, though this foul air is far purer than that which common Londoners breathe, for it is thrown in in such quantities that only a very small portion of it reaches any human lungs. Funnels are also placed over the great gas-burners by which the House is lighted, and the current of air which rushes up through these is very rapid.

tion of subjects from the table of contents of some specimen book.

The following is from the table of contents of a German "First Reading Book, for the lowest classes in elementary schools."

The arrangements for ventilating the House of Lords are almost precisely similar to those for the House of Commons, which I have described. When the foul or used-up air, from both Houses, has reached the attic, the currents are conducted into a common passage or channel. Through this channel the air is now carried down to the level of the earth. Here it enters the lower end of a vast cylindrical brick tower, eighty feet in height. The diameter of the tower is perhaps fifteen or twenty feet at the bottom, but it tapers gradually to the top, so that it exhibits the appearance of a truncated cone. About ten feet from the bottom, a grating of iron bars is laid across the interior of the tower, and on these a coal fire is kept burning. Thus the tower acts as a chimney. The air rarefied by the fire rapidly ascends, creating a vacuum below which causes the air from the attics of the two Houses to rush in, and then the pressure of the external air through the orifices first described, keeps up the current through its whole course.

One or two men are constantly employed in superintending this apparatus, directing the currents of air, so that they may be admitted at the proper temperature, purified, cooled by the fountains, or warmed by the pipes, as the varying days or seasons of the year may require. Beneath the House, at places where the pressure or crowd, on great state occasions, is likely to be most dense, large fans are provided, which, being rapidly revolved, force up through the orifices in the floor a much greater quantity of air than would ascend from the natural effect of a mere difference of temperature.

It is now between six and seven years that an *hourly* register has been kept of the state of the thermometer and barometer, as they are affected by the air that enters the Houses. The velocity and volume of the air is also noted, all the great passages being so contrived that they can be more or less opened and closed at pleasure. From the "woolsack" or speaker's chair in the House of Lords, a vertical tube descends to the basement below. At the upper end of this tube a thermometer is suspended for inspection by the members. The attendant in the basement, by means of a cord and pully, can let down this thermometer at any moment, mark its condition in his register, and immediately replace it without its being missed in the hall above.

In summer, the members are not only cooled by the water and the ice in the rooms below, but also by the velocity of the current of air;—that is, a current of air, at the temperature of sixty-five degrees, may be so increased in velocity as to produce sensations of coolness as great as another less rapid current would do at the temperature of sixty degrees. Sometimes one hundred and twenty cubic feet a minute are supplied to each pair of lungs.

All these circumstances are noted, from hour to hour, by clerks and superintendents; but it is left for the profound and scientific mind of Dr. Reid to strike the equations and evolve the grand results. That gentleman assured me that since the adoption of this system, hardly a cough had been heard in either House, (excepting, I presume, all coughs prepense, for the suppression of speeches.)

All the offices, committee-rooms, &c., belonging to the Houses are ventilated, substantially in the same way.

The provisions for warming and ventilating the new Houses of Parliament, are on a still grander scale. The entire edifice, including the halls for the two Houses, offices, committee-rooms, &c., is nine hundred feet long; and, on the grand or principal floor, there are between two and three hundred rooms. At one end of the building is to be the clock tower, at the other end the Victoria tower. From the summit of these towers, as high above earthly impurities and miasms as is practicable, the air is to be taken. It is to pass down these towers,—more or less down one or the other according to the course and strength of the wind,—to the basement of the structure. Here it is to be turned and conducted, in a horizontal direction, to a spacious reservoir in the centre. While moving towards this central point it can be turned into any one of a number of channels, and receive such changes,—warming, refrigeration, perfuming, medication, &c.,—as may be desired. From this great heart it is to be driven in all directions towards every part of the vast edifice; and, by a system of doors and valves, to be let into or shut off from any apartment of the many-mansioned building at pleasure.

"1st PART. LESSON I, The parental home; 2, Building materials, stone, lime, wood; 3, Construction, iron and glass; 4, The four elements; 5, Comparison of building materials; 6, The inner parts of houses; 7, House utensils and tools; 8, Clothing; 9, Food; 10, Inhabitants of houses; 11, Household animals and their uses; 12, Continuation,—the winged tribe; 13, Injurious animals in a house; 14, Conduct towards beasts; 15, Language, advantage of man over beasts.

"2d PART. QUALITIES OF THINGS. LESSON 1, Colors; 2, Forms; 3, Qualities which a house may have; 4, Qualities of some building materials; 5, Qualities which an apartment may have; 6, Qualities which tools may have; 7, Qualities which a road may have; 8, Qualities which water may have; 9, Qualities which food may have; 10, Qualities which articles of clothing may have; 11, Qualities which an animal may have,—bodily qualities; 12, What one learns from the actions of beasts; 13, Qualities which a man may have,—bodily qualities of a man; 14, Continuation,—moral qualities; 15, Qualities which a man must not have."

A *selection* from the residue of the lesson, follows:

"LESSON 17, Sounds and tones of beasts; 19, Sounds of inanimate things; 20, Properties and actions of plants and animals; 21, Actions in school; 23, Household arrangements; 25, Country occupations; 26, Conduct of children towards others; 41, Adding to the name of a thing a word of quality.

"3d PART. MORAL INSTRUCTION. LESSON 2, Order in families; 3, Duties of parents," &c. &c.

Then follow "stories for exciting and cultivating moral ideas and sentiments;" and the book closes with songs and prayers "for the awakening and animating of religious feeling."

The following titles are from "A course of Elementary Reading," by J. M. McCullock, D. D., eleventh edition, Edinburgh, 1842.

"1. PHYSICAL SCIENCE. On the pleasures of science; General properties of bodies,—Impenetrability, Extension, Figure, Divisibility, Inertia; Attraction of Cohesion; Attraction of Gravity; First lines of Mechanics; Motion; Momentum; Centre of Gravity; The Mechanical Powers; Pressure of watery fluids; Capillary Attraction; The Winds; Aqueous Vapor; Clouds and Mists, Rain, Dew, Snow, Hail; Powers of Vision; The quantity of Matter in the Universe.

"2. CHEMICAL SCIENCE. Properties of Free Caloric; Radiation; Conductors; Chemical Attraction; Simple Bodies; Oxygen, Hydrogen, Nitrogen, Carbon, Sulphur, Phosphorus; The Metals; Compound Bodies, Atmospheric Air, Water; Effects of Caloric, &c. &c.

"3. NATURAL HISTORY.—The Three Kingdoms of Nature. Minerals, Diamond, Flint, Asbestos, Clay, Slate, &c. &c. The Malleable Metals, Platina, Gold, Mercury, Silver, Copper, Iron, &c. &c. Clothing from Animals, Fur, Wool, Silk, Leather. Vegetable Physiology, Motion of the Sap, Leaves, The Seed, Germination, &c.; Circulation of the Blood. Vegetable Clothing, Flax, Hemp, Cotton. The Animal Economy," &c. &c.

The Fourth part of this work consists of pieces classed under the head of "Geography and Topography;" then follow Religious, Moral and Miscellaneous pieces, in prose and poetry, which complete the book.

There are hundreds, and perhaps thousands, of reading books in the different languages abroad. I have selected the above as a fair specimen of what I saw; and I believe most educators will agree with me, in thinking them far better suited to the tastes and capacities of the young than most of our own.

APPARATUS, &C.

I have seen but little of school apparatus abroad which is not to be found in good schools at home. The blackboard is a

universal appendage to the schoolroom, and is much more used than with us. Indeed, in no state or country have I ever seen a good school without a blackboard, nor a successful teacher who did not use it very frequently.

Generally speaking, the *infant* schools of England and Scotland are admirably supplied with abundant and appropriate apparatus. The schoolrooms are literally lined with cards from which to teach the alphabet, with short sentences in English, and a few texts of scripture or moral maxims. Delineations of various plants, trees, animals,—beasts, birds, fishes;—of different races of men, with their varieties of physiognomy and costume; of portraits of kings, queens and distinguished personages, a compass, a clock-face, &c. &c., are profusely provided.

In Holland, I saw what I have never seen elsewhere, but that which ought to be in every school,—the actual weights and measures of the country. These were used not only as a means of conveying useful knowledge, but of mental exercise and cultivation.

There were seven different liquid measures, graduated according to the standard measures of the kingdom. The teacher took one in his hand, held it up before the class, and displayed it in all its dimensions. Sometimes he would allow it to be passed along, by the members of the class, that each one might have an opportunity to handle it and to form an idea of its capacity. Then he would take another, and either tell the class how many measures of one kind would be equivalent to one measure of the other; or, if he thought them prepared for the questions, he would obtain their judgment upon the relative capacity of the respective measures. In this way, he would go through with the whole series, referring from one to another, until all had been examined and their relative capacities understood. Then followed arithmetical questions founded upon the facts they had learned,—such as, if one measure-full of wine costs so much, what would another measure-full cost, (designating the measure,) or four, or seven other measures-full? The same thing was then done with the weights.

It is easy to see how much more exact and permanent would be the pupil's knowledge of all weights and measures, obtained in this way, than if learned by heart from the dry tables in a book; and also how many useful and interesting exercises could be founded upon them by a skilful teacher. I believe it would be difficult to find many men in the community, of middle age, who can now repeat all those tables of weights and measures, which, as schoolboys, they could rehearse so volubly; or who, were they now to see actual sets of weights and measures, could call all the different ones by their true names, or could distinguish each denomination from the others if not seen in juxtaposition with them. Having learned the tables by rote, the words have long ago vanished from the mind, and the ideas never were in it.

Something of the same kind should be done also, in our schools, in reference to numbers. Children learn the numeration table without any adequate notion of the rapid increase

of the successive denominations; or how vast the numbers are which they rattle off with such volubility. I have often tested the knowledge of the older classes in our schools, as to their comprehension of large numbers, by asking them this question; —If a man were to count one, each second, for ten hours in a day, how many days would it take him to count a million?— and, in the same class, the answers have frequently varied from one day to thirty;—and this, when each one of the scholars could work any sum in the arithmetic. They had never learnt, by actual counting, the ratio of decimal increase; and nothing but practice will ever give an idea of it. Dr. Howe, of the Blind Institution at South Boston, says he considers "a peck of beans or corn an indispensable part of the apparatus of his school." If a boy says he has seen ten thousand horses, make him count ten thousand kernels of corn, and he never will see so many horses again.

In the public schools of Holland, too, large sheets or cards were hung upon the walls of the room, containing *fac similes* of the inscription and relief,—face and reverse,—of all the current coins of the kingdom. The representations of the gold coins were yellow, of the silver white, and of the copper, copper-color.

In the schools both of Holland and Germany, I occasionally saw printed sheets suspended from the walls of the school-room, containing practical advice and directions, respecting important emergencies or duties of life,—such as the best mode of proceeding to resuscitate a drowned person, of curing a burn, of stanching a ruptured blood-vessel, &c. &c.

In all the class-rooms for little children in Germany, were reading-frames or reading-boards for elementary instruction in language. These consist of parallel and horizontal laths, or bars, (called in America slats, in England sloats,) with grooves, into which small squares of pasteboard or blocks of wood, having letters printed upon them, can be inserted. The manner in which these are used will be described hereafter, under the head of "Reading."

In the schools for the deaf and dumb, I saw admirable collections of natural objects for the use of the pupils. These were not merely an assortment of shells and minerals, which generally fills up our conception of cabinets of this kind, but assemblages of different seeds of plants, particularly all those used for food or in the arts, of dried plants, &c. &c., arranged neatly in boxes, so that they could easily be handled without loss or injury. I found similar collections in other schools, but not on so large a scale; for it is peculiarly necessary that the deaf and dumb should *see* the objects of their lessons. These they are made to describe in spoken as well as in written words, and to connect their history with geographical knowledge.

In the deaf and dumb school at Dresden, I saw a very large collection of models of every description of utensil, also of many machines, mills, carts, &c. &c., made from wood by the pupils themselves. With the names and uses of every part of

these, they were made familiar. A vocabulary thus learned is much more fully impressed upon the memory than by any other conceivable mode; and, as it regards a knowledge of the things themselves, it is the only way of imparting it.

In a large charitable establishment at the Hague, destined for poor young children, whose parents brought them to the school early in the morning, and left them till night, when they were ready to return home from their day labor, I saw an excellent collection of this sort, from which the youngest children could derive much practical and useful knowledge. The great Burger and Real schools are generally supplied with fine instruments for lessons and practice in natural philosophy, chemistry, and mechanics. In Carlsruhe, besides the admirable endowment of such apparatus, which both the state and the friends of education have furnished to this class of schools,—the Grand Ducal cabinets, the physical cabinet, collections of natural objects, picture gallery, botanic garden, even the palace garden, and also the Grand Ducal court library, library of the Grand Ducal physical cabinet, that of the directors of the technical courts, and even the workshops and manufactories of the city and environs, are open at all times to the pupils. Pupils studying in the forest department are taken to the governmental woodlands to study botany, &c., among the trees and flowers; those of the architectural schools, the mining schools, &c., are empowered, and even enjoined by law, to visit the public works in progress, in company with their teachers.

These facts, besides being valuable as suggestions to us, afford us an idea of the greater practical turn given to education in those countries than amongst ourselves.

Many of the charity schools of Holland contained paintings of no inconsiderable excellence and value. In Germany, where everything, (excepting war and military affairs,) is conducted on an inexpensive scale, the walls of the schoolrooms were often adorned with cheap engravings and lithographs,—of distinguished men, of birds, beasts, and fishes;—and, in many of them, a cabinet of natural history had been commenced. And throughout all Prussia and Saxony, a most delightful impression was left upon my mind by the character of the persons whose portraits were thus displayed. Almost without exception, they were likenesses of good men rather than of great ones,—frequently of distinguished educationists and benefactors of the young, whose countenances were radiant with the light of benevolence, and the very sight of which was a moral lesson to the susceptible hearts of children. In this respect, they contrasted most strongly with England, where the great always takes precedence of the good, and there are fifty monuments and memorials for Nelson and Wellington to one for Howard or Wilberforce.

In the new building for the "poor school" at Leipsic, there is a large hall in which the children all assemble in the morning for devotional purposes. Over the teacher's desk, or pulpit, is a painting of Christ in the act of blessing little children. The design is appropriate and beautiful. Several most forlorn-

looking, half-naked children stand before him. He stretches out his arms over them, and blesses them. The mother stands by with an expression of rejoicing, such as only a mother can feel. The little children look lovingly up into the face of the Savior. Others stand around, awaiting his benediction. In the back-ground are aged men, who gaze upon the spectacle with mingled love for the children and reverence for their benefactor. Hovering above is a group of angels, hallowing the scene with their presence.

LANCASTERIAN OR MONITORIAL SCHOOLS.

I saw many Lancasterian or Monitorial schools in England, Scotland and Ireland; and a few in France. Some mere vestiges of the plan are still to be found in the "poor schools" of Prussia; but nothing of it remains in Holland, or in many of the German States. It has been abolished in these countries by a universal public opinion. Under such an energetic and talented teacher as Mr. Crossley, of the Borough Road school, in London; or, under such men as I found several of the Edinburgh teachers to be, and especially those of the Madras College at St. Andrews, the monitorial system,—where great numbers must be taught at a small expense,—may accomplish no inconsiderable good. But at least nine tenths of all the monitorial schools I have seen, would suggest to me the idea that the name, "monitorial," had been given them by way of admonishing the world to avoid their adoption. One must see the difference between the hampering, blinding, misleading instruction given by an inexperienced child, and the developing, transforming, and almost creative power of an accomplished teacher;—one must rise to some comprehension of the vast import and significance of the phrase, "to educate,"—before he can regard with a sufficiently energetic contempt that boast of Dr. Bell, "Give me twenty-four pupils to-day, and I will give you back twenty-four teachers to-morrow."

SCOTCH SCHOOLS.

There are some points in which the schools of Scotland are very remarkable. In the thoroughness with which they teach the *intellectual* part of reading, they furnish a model worthy of being copied by the world. Not only is the meaning of all the important words in the lesson clearly brought out, but the whole class or family of words, to which the principal word belongs, are introduced, and their signification given. The pupil not only gains a knowledge of the meaning of all the leading words contained in his exercise, but also of their roots, derivatives, and compounds; and thus is prepared to make the proper discriminations between analogous words whenever he may hear or read them on future occasions. For instance, suppose the word "*circumscribe*" occurs in the lesson; the teacher asks from what Latin words it is derived, and being answered, he then asks what other English words are formed by the help of

the Latin preposition "*circum.*" This leads to an explanation of such words as *circumspect, circumvent, circumjacent, circumambient, circumference, circumflex, circumfusion, circumnavigate, circumstance, circumlocution,* &c. &c. The same thing would then be done in reference to the other etymological component of "*circumscribe,*" viz., "*scribo;*" and here the specific meaning of the words *describe, inscribe, transcribe, ascribe, prescribe, superscribe, subscribe,* &c. &c., would be given. After this might come the nouns, adjectives, and adverbs, into which this word enters as one of the elements, such as *scripture, manuscript,* &c. The teacher says, Give me a word which signifies to copy. *Pupils.* Transcribe. *T.* To write in a book, or on a tablet. *P.* Inscribe. *T.* To write upon, or on the outside of, as on a letter. *P.* Superscribe. *T.* To write beneath, or under. *P.* Subscribe. *T.* A man goes around to obtain names for a book or newspaper; or to get promises of money for stocks or for charity. What does he want? *P.* Subscriptions. *T.* And what are those called who give him their names? *P.* Subscribers. *T.* And what is a copy called? *P.* Transcription. *T.* Or, by way of abbreviation? *P.* Transcript.

The same is done when a derivative of the Latin word "*pes*" occurs, as in the words, *impediment, pedestal, pediment, impede, expedite;*—or of the word "*duco,*" in *induce, produce, traduce, reduce, adduce, conduce, inducement, induction, deduction, reduction, production;* and then the names of the agents or persons performing these several acts are given.

So of words in which the Greek "*grapho*" is an element, as *geography, chirography, graphic, paragraph, telegraph, graphite,* (a mineral,) &c.

The same exercises take place in regard to hundreds of other words.

The Scotch teachers, the great body of whom are graduates of colleges, or have attended the university before beginning to keep school, are perfectly competent to instruct in this thorough manner. I think it obvious, however, that this mode of teaching may be carried too far, as many of our words, though wholly or in part of Latin or Greek derivation, have lost their etymological signification, and assumed a conventional one.

But all this,—admirable in its way,—was hardly worthy to be mentioned in comparison with another characteristic of the Scottish schools, viz., the mental activity with which the exercises were conducted, both on the part of teacher and pupils. I entirely despair of exciting in any other person, by a description, the vivid impression of mental activity or celerity, which the daily operations of these schools produced in my own mind. Actual observation alone can give anything approaching to the true idea. I do not exaggerate when I say that the most active and lively schools I have ever seen in the United States, must be regarded almost as dormitories, if compared with the fervid life of the Scotch schools; and, by the side of theirs, our pupils would seem to be hybernating animals just emerging from their torpid state, and as yet but half conscious of the

possession of life and faculties. It is certainly within bounds to say, that there were six times as many questions put and answers given, in the same space of time, as I ever heard put and given in any school in our own country.

But a few preliminary observations are necessary to make any description of a Scotch school intelligible.

In the numerous Scotch schools which I saw, the custom of place-taking prevailed, not merely in spelling, but in geography, arithmetic, reading, defining, &c. Nor did this consist solely in the passing-up of the one giving a right answer above the one giving a wrong. But if a scholar made a very bright answer, he was promoted at once to the top of the class; if he made a very stupid one, he was sentenced no less summarily to the bottom. Periodically, prizes are given, and the fact of having been "*Dux*," (that is, at the head of the class,) the greatest number of times, is the principal ground on which the prizes are awarded. In some schools an auxiliary stimulus is applied. The fact of having passed up so many places, (say ten or twelve,) entitles the pupil to a ticket; and a given number of these tickets is equivalent to being "*dux*" once. When this sharper goad to emulation is to be applied, the spectator will see the teacher fill his hand with small bits of pasteboard, and, as the recitation goes on and competition becomes keen, and places are rapidly lost and won, the teacher is seen occasionally to give one of these tickets to a pupil as a counter, or token, that he has passed up above so many of his fellows;—that is, he may have passed up above four at one time, six at another, and two at another,—and if twelve is the number which entitles to a ticket, one will be given without any stopping or speaking,—for the teacher and pupil appear to have kept a silent reckoning, and when the latter extends his hand, the former gives a ticket without any suspension of the lesson. This gives the greatest intensity to competition; and at such times, the children have a look of almost maniacal eagerness and anxiety.

I have said that questions were put by the teacher with a rapidity almost incredible. When once put, however, if not answered, they are rarely stated again in words. If the first pupil cannot answer, the teacher seldom stops to say "Next," but,—every pupil having his eye on the teacher, and being alive in every sense and faculty, and the teacher walking up and down before the class, and gesticulating vehemently,—with his arm extended, and accompanying each motion with his eye, he points to the next and the next, until perhaps, if the question is difficult, he may have indicated each one in a section, but obtained an answer from none; then he throws his arm and eye around towards one side of the room, inviting a reply from any one, and, if still unsuccessful, he sweeps them across the other side,—and all this will take but half a minute. Words being too slow and cumbrous, the language of signs prevails; and the parties being all eye and ear, the interchange of ideas has an electric rapidity. While the teacher turns his face and points his finger towards a dozen pupils consecutively,

inviting a reply, perhaps a dozen arms will be extended towards him from other sections or divisions of the class, giving notice that they are ready to respond; and in this way a question will be put to a class of fifty, sixty or eighty pupils, in half a minute of time.

Nor is this all. The teacher does not stand immovably fixed to one spot, (I never saw a teacher in Scotland sitting in a schoolroom,) nor are the bodies of the pupils mere blocks, resting motionless in their seats, or lolling from side to side as though life were deserting them. The custom is for each pupil to rise when giving an answer. This is ordinarily done so quick, that the body of the pupil, darting from the sitting into the standing posture, and then falling back into the first position, seems more like some instrument sent suddenly forwards by a mechanical force and then rapidly withdrawn, than like the rising and sitting of a person in the ordinary way. But it is obvious that the scene becomes full of animation, when,—leave being given to a whole division of a class to answer,—a dozen or twenty at once spring to their feet and ejaculate at the top of their voices. The moment it is seen that the question has been rightly answered, and this is instantaneously shown by the manner of the teacher, all fall back, and another question is put. If this is not answered, almost before an attentive spectator can understand it, the teacher extends his arm and flashes his eye to the next, and the next, and so on, and when a rapid signal is given to another side of the room, a dozen pupils leap to the floor and vociferate a reply.

Nor can the faintest picture of these exciting scenes be given, without introducing something of the technical phraseology used in the school.

If a pupil is not prompt at the moment, and if the teacher means to insist upon an answer from him, (for it will not do to pass by a scholar always, however dull,) he exclaims, in no very moderate or gentle voice, "Come away," or "Come away now;"—and if the first does not answer and the next does, he directs the latter to pass above the former by the conventional phrase, "Take him down." If a whole section stands at fault, for a moment, and then one leaps up and shouts out the reply, the teacher exclaims "Dux boy," which means that the one who answered shall take the head of the class.

Suppose the teacher to be hearing his class in a reading-lesson, and that the word "*impediment*" occurs, something very like the following scene may take place.

Teacher. "*Impediment*," from what Latin words?

Pupil. *In* and *pes.*

T. What does it mean?

P. To oppose something against the feet,—to keep them back.

T. How is the word "*pes*" used in statuary?

P. In pedestal,—the block on which a statue is raised.

T. In architecture?

P. Pediment.

T. In music?

P. Pedal, a part of an organ moved by the feet.

T. In botany?

P. Pedicle, or footstalk of a flower.

T. Give me a verb.

P. Impede.

T. A noun.

P. Impediment.

T. An adjective, which imports despatch in the absence of obstacles.

P. Expeditious.

T. An adjective, meaning desirable or conducive.

P. (Hesitates.) *T.* Come away. (To the next.) Come away. (He now points to half a dozen in succession, giving to each not more than a twinkling of time.)

Ninth Pupil. Expedient.

T. Take 'em down. (This pupil then goes above eight.)

All this does not occupy half the time in the class that it takes to read an account of it.

In a school where a recitation in Latin was going on, I witnessed a scene of this kind;—the room, unlike the rooms where the children of the common people are taught, was large. Seventy or eighty boys sat on deskless, backless benches, arranged on three sides of a square or parallelogram. A boy is now called upon to recite,—to parse a Latin noun, for instance. But he does not respond quite so quickly as the report of a gun follows the flash. The teacher cries out, "Come away." The boy errs, giving perhaps a wrong gender, or saying that it is derived from a Greek verb, when, in fact, it is derived from a Greek noun of the same family. Twenty boys leap forward into the area,—as though the house were on fire, or a mine or an ambush had been sprung upon them,—and shout out the true answer in a voice that could be heard forty rods. And so the recitation proceeds for an hour.

To an unaccustomed spectator, on entering one of these rooms, all seems uproar, turbulence and the contention of angry voices,—the teacher traversing the space before his class, in a state of high excitement, the pupils springing from their seats, darting to the middle of the floor, and sometimes, with extended arms, forming a circle around him, two, three, or four deep,—every finger quivering from the intensity of their emotions,—until some more sagacious mind, outstripping its rivals, solves the difficulty,—when all are in their seats again, as though by magic, and ready for another encounter of wits.

I have seen a school kept for two hours in succession, in this state of intense mental activity, with nothing more than an alternation of subjects during the time, or perhaps the relaxation of singing. At the end of the recitation, both teacher and pupils would glow with heat, and be covered with perspiration, as though they had been contending in the race or the ring. It would be utterly impossible for the children to bear such fiery excitement, if the physical exercise were not as violent as the mental is intense. But children who actually leap into the air

from the energy of their impulses, and repeat this as often as once in two minutes, on an average, will not suffer from suppressed activity of the muscular system.

The mental labor performed in a given period in these schools, by children under the age of twelve or fourteen years, is certainly many times greater than I have ever seen in any schools of our own, composed of children as young. With us, the lower classes do not ordinarily work more than half the time while they are in the schoolroom. Even many members of the reciting classes are drowsy, and listless, and evidently following some train of thought,—if they are thinking at all,—whose scene lies beyond the walls of the schoolhouse, rather than applying their minds to the subject-matter of the lesson, or listening to those who are reciting, or feigning to recite it. But in the mode above described, there is no sleepiness, no droning, no inattention. The moment an eye wanders, or a countenance becomes listless, it is roused by a special appeal; and the contagion of the excitement is so great as to operate upon every mind and frame that is not an absolute non-conductor to life.

One sees at a glance, how familiar the teacher, who teaches in this way, must be with the whole subject, in order to command the attention of a class at all.

I was told by the Queen's Inspector of the schools in Scotland, that the first test of a teacher's qualification is, his power to excite and to sustain the attention of his class. If a teacher cannot do this, he is pronounced, without further inquiry, incompetent to teach.

There are some good schools in England, such as the Normal School at Battersea, those of the Home and Colonial Infant School Society, and the Borough Road school, in London, and some others; but, as I saw nothing in these superior to what may be seen in good schools at home, I omit all remarks upon them.*

PRUSSIAN AND SAXON SCHOOLS, SUBJECTS TAUGHT, MODES OF TEACHING, GOVERNING, &C.

The question which the friends of education, in Massachusetts, have been most anxious to hear answered, in regard to the schools of Prussia, Saxony, and some other parts of Germany, are such as these:—What branches are taught in them? What are the modes and processes of teaching? What incitements or motive-powers are employed for stimulating the pupils to learn? In fine, what is done when teacher and pupils meet each other face to face in the schoolroom, how is it done, and with what success?

* The famous school at Norwood,—eight or ten miles from London,—where more than a thousand of the pauper children of London are collected, is an extraordinary sight, without being an extraordinary school.

[To be continued.]

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